

University of Mississippi
Oxford, MS

Chemistry
Bachelor of Science, December 2002

**NASA Academy Research Project:
Landing Site Selection for Mars
Missions: Analysis of the Ma'adim
Vallies/Gusev Crater System and
the Search for Water and Life**

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Experience

During my freshman year of college, I read “The Case for Mars” by Robert Zubrin. This book began my interest in the exploration of space, and eventually led to my involvement in Astrobiology. While at the University of Mississippi, I have been able to pursue a variety of interests in several departments. Within my home department of Chemistry, I have been fortunate to work in the Biochemistry lab of Dr. Susan Pedigo. Our work focuses on the ligand-protein interaction, and the kinetics of protein folding. My current project involves using specific fluorine labeled amino acids within a protein to understand conformational changes within the protein as it is exposed to different environments. I was awarded a grant through the Mississippi Space Grant Consortium to help fund my work.

Because of Astrobiology’s emphasis on crossing over traditional fields, I branched out into the biology and geology departments here at the University of Mississippi. I got the opportunity to be a teaching assistant for microbiology lab under Dr. Al Mikell. I quickly learned that preparing for a class is not nearly as difficult as preparing to explain a concept or technique to a room of students. I enjoyed the experience immensely, and learned a good deal from it as well.

Extra-Curricular Activities

I am an avid salt-water fisherman and also enjoy scuba diving. I do most of my fishing and diving on the Alabama gulf coast, but over the years have gotten the opportunity to dive at a few more exotic locations. I have been certified since I was 13 years old. My recent interest that I have taken up is flying. I am very close to completing my private pilot license and really have gotten addicted to flying.

I am a member of Sigma Chi Fraternity and was the Risk Manager for my Chapter last year. I am currently the “Charity Bowl Chairman”. This annual philanthropy is a football game between my fraternity and Sigma Nu Fraternity. We expect to raise around \$90,000 between the two organizations. The money will be donated to the Christopher Reeves Paralysis Foundation, and Mr. Reeves will be in attendance to accept the donation. It has been a lot of work, but it is a great cause and also a chance for guys to relive their high school glory days.